

Changing Attitudes Towards People with Disabilities in a Positive Direction: A Pilot Practice of Psychoeducation in Primary Education

Ayça Büyükcebeci¹ Fikriye Demirkıran²

Article History:

Received 15.02.2024

Received in revised form 23.07.2024

Accepted

Available online

23.07.2024

Background: Acceptance by society and a sense of belonging are fundamental needs, second only to physiological requirements. However, discrimination, involving the exclusion of individuals perceived as different and less worthy, remains a pervasive issue in almost every society. Those most adversely affected by this problem are often people with disabilities. This study aimed to assess the impact of a multi-component psychoeducational program on the attitudes of children with typical development toward peers with disabilities during middle childhood. Participants and procedure: An experimental study was conducted, involving 61 students aged 9-12 attending primary school. The pretest-posttest results of the experimental, placebo, and control groups were compared at the end of the study. Results: The psychoeducational program was found to significantly enhance the attitudes of typically developing children toward their peers with disabilities. Specifically, statistically significant differences were observed in the avoidance dimension and the total attitude score among typically developing children in the experimental, placebo, and control groups. However, no significance was found in the dimensions of acceptance, pity, and sense of similarity. Conclusions: The study's findings are expected to contribute to preventive and intervention programs designed to foster positive attitudes towards people with disabilities in primary education.

© IJERE. All rights reserved

Keywords: Children with disabilities, developing positive attitudes, middle childhood period

INTRODUCTION

Human beings deserve to live in a non-discriminatory society where they can lead healthy, peaceful, and dignified lives. It is a basic need for all of us to be accepted by others and to feel part of society. However, in social life, individuals exclude those who are not like them because of their differences or are excluded because of their differences. People with disabilities are among the most exposed groups to discrimination and exclusion. People with disabilities are recognized as one of the world's largest minority groups (Friedman et al., 2006) that experience disability-related discrimination. Although approximately 16% of the world's population is composed of persons with disabilities (WHO, 2023), these individuals and their families may face various difficulties in participating in education, work, and social life.

In a study conducted by the Ministry of Family and Social Policy in Türkiye, it was found that almost all citizens with disabilities believe that they are discriminated against (Ministry of Family and Social Policy, 2010), and more than half of adult citizens without disabilities have negative prejudices against people with disabilities (Ministry of Family and Social Policy, 2010, 2014). Moreover, there are many studies in the literature that prove that students with disabilities in primary and secondary schools are much more victimized, excluded, and bullied than students with typical development (Andreou et al., 2015; Berchiatti et al., 2021; Cincioğlu, 2023; Liasidou & Ioannidou, 2021; Luciano & Savage, 2007; Ralph, 2018; Rivera & Tilcsik, 2023; Sarı & Pürsün, 2019). Similarly, in a study conducted with students with typical development attending primary schools, it was concluded that almost all the children had no information about persons with disabilities and received no education in this direction. In addition, the same study concluded that while the attitudes of the younger age group towards people with disabilities were positive, there was a significant decrease in positive attitudes from the age of 12-13, and as the children grew older, they began to see their peers with disabilities as having a lower status than themselves and excluded them (Terzi et al., 2020). In conclusion, it can be said that the greatest obstacle to the social participation and acceptance of people with disabilities is social prejudice and negative attitudes rather than their individual inadequacies.

Attitudes and prejudices, like many of behaviors, are not acquired at birth. Children's ability to distinguish people who are not like them and form attitudes toward them develops in parallel with cognitive development and is influenced by various factors such as parents, friends, mass media, and personal experiences (Özyürek, 2016; Sezer, 2012; Terzi et al., 2020). Discrimination and the sense of belonging to a group begin with the distinction between "me," "others like me," and "others." According to social identity development theory, in the first two years of life, children do not discriminate against common characteristics of groups such as age, gender, race, and physical and behavioral differences (Nesdale, 2017), but around the age of two, selectivity and discrimination skills develop with increased social observation and interaction with the environment.

The first distinction the child makes is the gender difference. The first social distinction a child makes is based on gender. After the age of two, children's responses to their environment also become differentiated

¹Mugla Sıtkı Kocman University, aycebuyukebeci@mu.edu.tr orcid.org/ 0000-0002-0667-6808²Mugla Sıtkı Kocman University, f.demirkiran98@gmail.com, orcid.org/ 0000-0001-9517-2996

(Nesdale, 2004). By two to three years of age, children take into account not only gender but also cues such as age, ethnicity, and physical and behavioral characteristics to distinguish between those who are similar to them and those who are not (Katz, 2013; Nesdale, 2017). Between the ages of 3 and 5, the child gradually prefers group members who are similar to him or her, sees others outside the group on the basis of various cues, and generalizes them as others. Because the child's focus during this period is on those in the group, prejudicial attitudes toward others outside the group are not yet observed. However, even though the child's interest is again focused on the dissimilar at the age of 6-7, they also begin to focus on the characteristics of the dissimilar (Nesdale, 2004, 2017). At the age of 7, a transition to the out-group negativity stage is observed (Nesdale, 2017). Instead of preferring out-group members less than group members as in the previous stage, the child tries to feel superior to others through various verbal and behavioral aggressive attitudes and prejudicial approaches such as humiliating, maligning, and hating the other group and/or member (Nesdale, 2004, 2017). It is during this period that not only prejudice and discrimination, but also decision-making and moral judgments are formed (Rutland & Killen, 2017). Although in theory discrimination and prejudicial behavior are considered morally unacceptable, in real life, excluding those who are outsiders from the group and making decisions in favor of those who are like-minded for the sake of in-group harmony, a sense of belonging, and order may begin to be seen as legitimate.

The United Nations Convention on the Rights of Persons with Disabilities includes measures to "promote respect for the human rights of persons with disabilities at all levels of the education system for all children from an early age" and "promote educational programs that raise awareness of persons with disabilities and their rights" (United Nations Centre for Human Rights, 2006). In this direction, it is believed that there is a need for a preventive, feasible, and sustainable psycho-educational program to develop positive attitudes towards people with disabilities in primary education. The aim of this study was to test the effectiveness of a multicomponent psychoeducational program based on information, role-playing, use of materials, and interaction with children with disabilities to positively improve the attitudes of 9–12-year-old children with normal development towards individuals with disabilities.

METHOD

Participants

The sample of this study, which aims to positively affect the attitudes of normal developing children towards children with disabilities, consists of 61 students between the ages of 9 and 12 who attend the 4th grade of a primary school. In this section, the design of the study, the participants, the data collection tools and the techniques used in the analysis of the data are given.

Research Design

Research design refers to studies planned to be carried out by a researcher in order to seek answers to the research questions. Obtaining findings with high validity and reliability in the research design is related to controlling the variance of dependent variable(s) (Balçı, 2001). In this study designed to determine the curriculum literacy level of teachers, a quantitative research design was used involving the survey method. A survey model is a model designed to detect a past or present situation as it exists (Karasar, 2019). Survey research is based on the principle of first determining a research problem and then determining any sub-problems. An appropriate survey is then devised to elicit data needed to answer the research questions. The data collected in survey studies are very well defined and the questions asked to the participants within the scope of the research must be related to the purpose (Cohen & Manion, 1997; Fraenkel & Wallen, 2006). The main purpose of the current study is to investigate the possible relationships between teachers' curriculum literacy level and the variables of gender, age, school level, years of work experience and postgraduate education status. In this context, a correlational research design was employed. A correlational research design is used to determine the existence and/or degree of co-variance between two or more variables (Karasar, 2019).

Participants

The study was carried out with teachers working in public and private schools in the Birecik district of Şanlıurfa Province in Turkey in the 2020-2021 academic year. The participants consisted of 447 teachers

working in the Birecik district. The distribution of the education regions of the schools in the Birecik district is determined by the Şanlıurfa Provincial Directorate of National Education. Demographic characteristics of the teachers participating in the study are given in Table 1.

Table 1. Sex and Age Distribution of Individuals in experimental, Placebo, and Control Groups

Experimental Group					
No	Sex	Age	No	Sex	Age
1	Female	9	11	Female	10
2	Female	10	12	Male	10
3	Male	10	13	Male	10
4	Male	9	14	Male	10
5	Female	9	15	Male	10
6	Male	10	16	Male	9
7	Male	10	17	Male	10
8	Female	10	18	Male	9
9	Female	10	19	Female	10
10	Female	9	20	Male	10
Placebo Group					
No	Sex	Age	No	Sex	Age
1	Male	9	11	Male	10
2	Male	9	12	Male	9
3	Male	10	13	Male	10
4	Female	10	14	Male	9
5	Female	9	15	Female	10
6	Male	9	16	Female	9
7	Female	9	17	Male	10
8	Female	9	18	Male	10
9	Male	10	19	Male	10
10	Female	9	20	Male	9
			21	Female	9
Control Group					
No	Sex	Age	No	Sex	Age
1	Male	10	11	Male	10
2	Female	10	12	Male	9
3	Male	10	13	Female	11
4	Male	10	14	Female	11
5	Female	10	15	Male	11
6	Male	10	16	Male	11
7	Male	10	17	Male	12
8	Male	11	18	Female	12
9	Male	11	19	Male	10
10	Male	11	20	Female	10

Table 1 shows the sex and age of the students in the experimental, placebo, and control groups. The experimental group consisted of 8 females (40%) and 12 males (60%); the placebo group consisted of 8 females (38.1%) and 13 males (61.9%); and the control group consisted of 6 females (30%) and 14 males (70%).

Data Collection Form

The Individual Information Form used in the study is a form created by the researchers to collect information such as first name, last name, age, sex, and grade level.

CATCH Attitudes Towards Children with Handicaps Scale

The Chedoke-McMaster Attitudes Towards Children with Disabilities Scale (2020), developed by Rosenbaum et al. (1986) and adapted into Turkish by Gümüş and Öncel, consists of 31 5-point Likert-type items. The scale was developed to assess the attitudes of children between the ages of 9-13 towards children with disabilities. The scale consists of four sub-dimensions: avoidance, interaction-acceptance, pity, and sense of similarity, and is evaluated with a total attitude score. Negative items in the scale are reverse scored, and higher scores indicate that the child's attitude towards individuals with disabilities in that dimension and in general is more positive. The Cronbach alpha value of the test is between 0.85 and 0.90.

Procedure

The study was initiated by obtaining ethics committee approval and research application permissions from state institutions. The criteria for the selection of the school where the study would be conducted were that the school was easily accessible to the Center and the Special Education School for Students with Disabilities, that the school consisted of students from middle and low socio-economic levels, that the class size was less than 30, that there were enough 4th grade classes in the school to form the experimental, placebo and control groups, and that there were no mainstreaming students in these classes.

The school administrators and branch classroom teachers at the selected school were informed about the research to be conducted in their schools and the research process. Parental information and consent forms were obtained by classroom teachers. Experimental, placebo, and control groups were determined among classes by drawing lots. The researchers personally attended the groups, provided information about the research, and obtained student consent forms. The information form and the CATCH Attitudes Towards Children with Handicaps Scale were administered to 71 students on a voluntary basis, except for 1 student in the experimental group whose parents did not give consent and 3 students in the control group who did not want to participate in the study. When the scales were evaluated, the scale scores of 10 students were invalid, which resulted in the inclusion of 61 students in the study. Since the study focused on the attitude changes of normally developing children towards children with disabilities, 11 students with disabilities who would participate in the applications were excluded from the evaluation. The psycho-education process continued for 11 weeks, and the CATCH Attitudes Towards Children with Handicaps Scale was administered as a post-test to 61 students in the experimental, placebo, and control groups.

Experimental procedures

When developing the psychoeducation program to be implemented, activities were included that involved multiple components such as information, videos, and slides about disabilities, role-playing/dramatization, and social interaction, which are recommended for successful attitude change and sensitivity training (M. Armstrong et al., 2016; Lindsay & Edwards, 2013; Tasa & Namatoğlu, 2018). Social contact with people with disabilities is known to be an experience that significantly improves children's attitudes and empathy. (M. Armstrong et al., 2016). In addition, educational policies and social traditions were considered when determining the activities, and outdoor games, sports, and art activities based on social interaction with children with disabilities included activities that both groups can enjoy and transfer positive emotions (Mellecker et al., 2013).

The psycho-educational program designed to positively improve attitudes towards children with disabilities was carried out with the experimental group on Fridays every week for a total of 11 sessions (weeks), with 7 sessions (sessions 1, 2, 3, 4, 5, 7, 11) as two hours (80 min) in their own schools and classrooms and 4 sessions

(sessions 6, 8, 9, 10) at the special education school where children with moderate to severe intellectual disabilities and multiple disabilities who were not inclusion students attended.

Eleven children with disabilities to participate in the interventions with normal students at the special education school were selected from students with teachable intellectual disabilities and multiple disabilities in the age group of 6-15 years, who were open to communication, could take instructions, and did not have aggressive attitudes and behaviors, in consultation with the school administration and teachers (2 students with Down syndrome, 2 students with cerebral palsy and intellectual disability who were not inclusion students, 3 students diagnosed with autism who were not inclusion students, and 4 students with intellectual disability at a teachable level of unknown cause). The families of the students with disabilities to be included in the activities were communicated with and informed about the activities, and their consent was obtained.

With the placebo group, the experimental process was carried out in 11 sessions, two class hours (80 minutes) on Wednesdays each week. The sessions with this group were conducted in their own schools and classrooms. In contrast to the psycho-educational program designed for the research, the placebo group was given a program on nature, environment, and recycling, and this group did not have a common activity with children with disabilities. The training for the placebo group was also conducted by the same researchers to avoid practitioner differences. The control group did not receive any training. The education of the placebo group was also conducted by the same researchers to avoid practitioner differences. The control group did not receive any educational programs.

The 11-week program of the psycho-education intervention in the experimental group is given in Table 2.

Table 2. Psychoeducation Programe

	PROCEDURE	GOAL
SESSION 1. Purpose of the group, group norms, introductions.	Purpose of the group, group norms, and introductions. Activity to meet each other. Name tag art activity. Sharing of thoughts and emotions.	Determining the group norms, meeting each other. Drawing attention to individual differences.
SESSION 2. Differences enrich us.	The story of the fight of the seven colors of the rainbow. Thoughts and feelings about the story. Dramatization of the story. Design a rainbow art activity.	We are all different. We are a society with our differences.
SESSION 3. Inadequacy, disability. Individuals with intellectual disabilities.	Inadequacy and disability. Delivering the presentation on individuals with intellectual disabilities. Emphasizing the similar and different characteristics of children with intellectual disabilities. Answering questions. Asking about feelings and thoughts about the subject.	Recognizing intellectual disability. Noticing similarities.
SESSION 4. Individuals with hearing and visual impairment.	Delivering the presentation on individuals with hearing and visual impairment. Sign language introduction. Sharing writing and mathematics educational materials used in the education of individuals with visual impairment. Dramatization activities. Thoughts and emotions.	Recognizing hearing and visual impairment. Noticing similarities.
SESSION 5. Are disabilities a hindrance to success?	Presentation on physical disabilities. Dramatization activities with wheelchairs and crutches. Success stories of individuals with disabilities. Drawing activity based on the "Country of Tolerance" collaboration.	Developing the understanding that individuals with disabilities are a part of society.
SESSION 6. Visit to the special education school. Meeting children with disabilities.	Visiting the special education school. Visiting the departments and classrooms of the school. Meeting with the group of individuals with disabilities. Outdoor group game. Distribution of forms for thoughts and feelings about the activities. Saying goodbye, returning to school.	Interacting with children with disabilities, developing positive attitudes.
SESSION 7. Feelings and thoughts on interactions with children with disabilities.	Sharing homework related to the special education school visit and introductions in the classroom. Activity of designing the cards that they will give to their friends with disabilities that they met and liked.	Evaluating the shared activities that they experienced with their friends with disabilities.
SESSION 8. Interactive activities with children with disabilities.	Taking the experimental group to the special education school. Delivering the cards. Basketball shooting activity and outdoor group game. Saying goodbye.	Developing positive feelings and attitudes towards children with disabilities.
SESSION 9. Interactive activities with children with disabilities.	Taking the experimental group to the special education school. Activity of t-shirt designing together. Completion of the activity through collaborating. Exhibiting the designed works by hanging them on the walls.	Ability to work with children with disabilities on a collaboration-basis.
SESSION 10. Interactive activities with children with disabilities and farewell party.	Taking the experimental group to the special education school. Outdoor group games and dance activities. Offering cake and juice. Presenting the gifts of program pins to the children with disabilities. The farewell of the two groups.	Finalizing the mutual interaction experience with positive feelings.
SESSION 11. Final remarks, Post-test implementation, and farewell.	Final remarks letter activity on thoughts and feelings. Post-test implementation. Farewell party. Presenting pins and certificates of attendance to the experimental group. Termination of the experimental activity.	Ending the study with the experimental group, post-test assessment.

Data analysis

Prior to analyzing the study data, the CATCH Attitudes Towards Children with Disabilities Scale administered to normally developing children in the experimental, placebo, and control groups was evaluated to determine whether it met the basic assumptions of parametric testing to identify which tests would be used. As presented in the results section (Preliminary Analyses), it was determined that the basic assumptions were met and therefore parametric tests should be used.

According to the pre-test results applied to the normally developing children in the experimental, placebo, and control groups, there was no significant difference in the attitudes of the groups towards children with disabilities. Therefore, a 3X2 repeated measures ANOVA was completed in the analysis of this variable using IBM SPSS Statistics 26.

FINDINGS

Preliminary analysis results

As discussed in the section on data analysis, there are several assumptions for the use of parametric tests. The first of these is homogeneity of variances. Therefore, homogeneity of variances was tested for the attitudes and empathy levels of normally developing children in the experimental, placebo, and control groups toward children with disabilities. The results of Levene's homogeneity test are shown in Table 3.

Table 3. Homogeneity Test Analysis Results for the Pre-test Scores of Experimental, Placebo, and Control Groups

	Levene's Statistics	sd1	sd2	P
Pre-test attitude	1.481	2	58	.236

As shown in Table 3, the variance of the pretest measures of the attitudes of normally developing children in the experimental, placebo, and control groups toward children with disabilities met the homogeneity assumption.

Another necessary assumption for the use of parametric tests is the normal distribution. In this regard, the Kolmogorov-Smirnov test was performed, including all three groups of both variables. The results are shown in Table 4.

Table 4. Kolmogorov-Smirnov Normality Test Results for the Pre-test Scores of Experimental, Placebo, and Control Groups

Variable	Group	Kolmogorov-Smirnov Statistics	sd	p
Pre-test attitude	Experimental	.122	20	.20
	Placebo	.147	21	.20
	Control	.094	20	.20

As shown in Table 4, according to the results of the Kolmogorov-Smirnov normality test, the data of the study fit the normal distribution curve. Finally, the skewness and kurtosis of the pretest scores of the experimental, placebo, and control groups were also evaluated. The results are shown in Table 5.

Table 5. Results of the Scores Obtained from the Measurement Tools by the Participants in the Experimental, Placebo and Control Groups

	Group	\bar{X}	Sd	Skewness	Kurtosis
Pre-test attitude	Experiment	68.35	16.54	.541	-.002
	Placebo	63.76	12.18	.229	1.92
	Control	70.40	13.33	-.248	.323

Skewness and kurtosis values were found to be within acceptable limits for a normal distribution, and it was determined to use parametric tests in accordance with all these findings.

An ANOVA analysis was performed to determine whether the group scores differed significantly on the pretest variables. The results are shown in Table 6.

Table 6. ANOVA Results for Pretest Attitude Scores of Experimental, Placebo, and Control Groups

Variable	Group	n	\bar{X}	sd	Source	Sum of Squares	df	Mean Squares	F	p
Avoidance	Experimental	20	24.60	7.66	Between Groups	104.89	2	52.44	.99	.38
	Placebo	21	21.57	5.32						
	Control	20	23.95	8.53	Within Group	3062.89	58	52.808		
Acceptance	Experimental	20	24.40	8.38	Between Groups	59.30	2	29.65	.53	.59
	Placebo	21	22.62	6.45						
	Control	20	24.90	7.59	Within Group	3261.55	58	56.23		
Pity	Experimental	20	9.55	4.06	Between Groups	3.29	2	1.64	.11	.89
	Placebo	21	9.76	4.06						
	Control	20	9.20	3.14	Within Group	829.96	58	14.31		
Sense of Similarity	Experimental	20	11.15	3.95	Between Groups	66.25	2	33.13	2.64	.08
	Placebo	21	9.81	2.86						
	Control	20	12.35	3.76	Within Group	728.34	58	12.56		
Attitude Total Score	Experimental	20	68.35	16.54	Between Groups	475.89	2	237.94	1.20	.31
	Placebo	21	63.76	12.18						
	Control	20	70.40	13.33	Within Group	11541.16	58	198.99		

According to the ANOVA results presented in Table 6, there was no significant difference between the six dimensions of the attitudes towards children with disabilities scale that are, avoidance ($F_{2-58} = .99, p > .05$), acceptance ($F_{2-58} = .53, p > .05$), pity ($F_{2-58} = .11, p > .05$), and the sense of similarity ($F_{2-58} = 2.64, p > .05$), and the total attitude score ($F_{2-58} = 1.20, p > .05$) and the mean scores obtained in the experimental, placebo, and control groups pre-test scores. Therefore, it can be said that the attitudes of normally developing children in the experimental, placebo, and control groups towards children with disabilities were equal to each other before the intervention.

Testing the hypothesis

In the study, first, the attitudes of normally developing children towards children with disabilities were examined. In this context, the results of the CATCH attitudes towards children with disabilities scale sub-dimension and total scores applied to the participants in the experimental, placebo, and control groups as pre-test and post-test are presented in Table 7.

Table 7. Means and Standard Deviations for CATCH Attitudes Toward Children with Disabilities Scale Pre-test and Post-test Scores for Experimental, Placebo, and Control Groups

Variable	Group	\bar{X}	sd	Variable	Group	\bar{X}	sd
Pre-test avoidance	Experimental	24.60	7.66	Post-test avoidance	Experimental	30.00	6.91
	Placebo	21.57	5.32		Placebo	21.05	7.62
	Control	23.95	8.53		Control	22.55	11.36
Pre-test acceptance	Experimental	24.40	8.38	Post-test acceptance	Experimental	28.60	7.24
	Placebo	22.62	6.45		Placebo	23.05	6.87
	Control	24.90	7.59		Control	22.55	7.68
Pre-test pity	Experimental	9.55	4.06	Post-test pity	Experimental	12.25	5.53
	Placebo	9.76	4.06		Placebo	8.33	3.51
	Control	9.20	3.14		Control	10.90	5.16
Pre-test sense of similarity	Experimental	11.15	3.95	Post-test sense of similarity	Experimental	13.55	2.95
	Placebo	9.81	2.86		Placebo	10.62	4.10
	Control	12.35	3.76		Control	12.00	4.89
Pre-test attitude total score	Experimental	68.35	16.54	Post-test attitude total score	Experimental	84.25	17.36
	Placebo	63.76	12.18		Placebo	63.05	14.77
	Control	70.40	13.33		Control	68.00	18.74

Table 7 shows the mean and standard deviation scores of the experimental, placebo, and control groups for the pre-test and post-test scores of the attitude scale towards children with disabilities. The results of the repeated measures ANOVA conducted to determine whether there was a statistically significant difference

between the pre-test and post-test scores of the experimental, placebo, and control groups are presented in Table 8.

Table 8. ANOVA Results for Repeated Measures on CATCH Attitudes Towards Children with Disabilities Scale Pre-test and Post-test Scores of the Placebo and Control Groups

	Source	Sum of Squares	Ss	Mean Squares	F	p	Partial Eta Square
	Between groups						
Avoidance	Group (E/P/C)	380.566	2	190.283	4.145	.021	.125
	Within Groups						
	Group*Measurement	275.056	2	137.528	3.534	.036	.109
	Between groups						
Acceptance	Group (E/P/C)	148.538	2	74.269	1.769	.179	.058
	Within Groups						
	Group*Measurement	216.209	2	108.105	4.308	.018	.129
	Between groups						
Pity	Group (E/P/C)	35.281	2	17.641	1.403	.254	.046
	Within Groups						
	Group*Measurement	95.655	2	47.827	3.930	.025	.119
	Between groups						
Sense of similarity	Group (E/P/C)	58.076	2	29.038	2.761	.072	.087
	Within Groups						
	Group*Measurement	38.132	2	19.066	2.382	.101	.076
	Between groups						
Attitude total score	Group (E/P/C)	1706.725	2	853.362	4.437	.016	.133
	Within Groups						
	Group*Measurement	2058.065	2	1029.033	9.965	.001	.256

In Table 8, when the group main effect is considered independently of the measurements, the results of the analysis performed on the mean scores obtained in the pre- and post-test measurements of the CATCH Attitudes Towards Children with Disabilities Scale by typically developing children in the experimental, placebo, and control groups showed that there is a statistically significant difference in the avoidance dimension ($F_{(2-58)} = 4.145$; $p < .05$) and the total attitude score ($F_{(2-58)} = 4.437$; $p < .05$). On the other hand, there

was no significance in the dimensions of acceptance ($F_{(2-58)}= 1.769$; $p > .05$), pity ($F_{(2-58)}= 1.403$; $p > .05$) and sense of similarity ($F_{(2-58)}= 2.761$; $p > .05$).

When the results obtained by considering the group and the common effect of the measurement in which the effect of the experimental procedure can be determined are examined, there is a statistically significant difference in the total score ($F_{(2-58)}= 9.965$; $p < .001$), and the dimensions of avoidance ($F_{(2-58)}= 3.534$; $p < .05$), acceptance ($F_{(2-58)}= 4.308$; $p < .05$), and pity ($F_{(2-58)}= 3.930$; $p < .05$) toward children with disabilities. In other words, it is determined that the education program/experimental procedure positively increased the level of attitudes towards children with disabilities with normal development.

RESULT and DISCUSSION

As a result of the study, it was found that the psychoeducational program and the experimental procedure increased the avoidance, acceptance, interaction dimensions, and total attitude scores toward children with disabilities at a high rate and positively. However, although there was a positive effect on the dimension of sense of similarity, this effect was not significant. The literature indicates that people with intellectual and severe behavioral disabilities are the most discriminated against and the most difficult to accommodate among disability groups (Llewellyn et al., 2015; Temple et al., 2019). In light of this information in the literature, the group with disabilities interacted with in the study was selected from the group that is very different from typical children, has multiple disabilities in addition to severe intellectual disabilities, and is not subjected to inclusive education. A review of the literature revealed that in the interaction-based studies that tested the effects of attitudinal programs, the disabled groups that were interacted with were children with mild disabilities or physical disabilities who were subjected to inclusion (Alkaabi et al., 20-22; Evans et al., 2015; Özgönenel & Girli, 2016; Sezer, 2012; Şahbaz, 2007). Although the psychoeducational program implemented in this study led to an increase in the sense of similarity in typically developing children, the reason why this increase was not significant may be that the children interacted with children they had never met before, who looked and behaved very differently from themselves, and who were subjected to separate educational practices due to severe and moderate intellectual and/or multiple disabilities.

The results of the psycho-educational program showed that there was a significant and highly positive increase in the attitudes of typically developing children toward children with disabilities in the sub-dimensions of avoidance, interaction-acceptance, and pity, as well as in the total attitude scores, which clearly showed the effectiveness of the program. When the studies conducted in this area were examined, it was found that educational applications and/or experimental studies aimed at positively changing attitudes toward people with disabilities were extremely rare compared to descriptive studies for problem identification, and the majority of these studies were conducted with applications based only on cognitive activities such as information, unlike our study (Iwakuma et al., 2023; Özer et al., 2012; Öztürk & Yıkıuş, 2013; Şahin & Güldenoğlu, 2013; Triliva et al., 2009). However, it is noted that providing information alone cannot completely change attitudes and that the program to be implemented must include activities aimed at interacting with and having an experience with the group members to develop positive attitudes (M. Armstrong et al., 2016; Freer, 2023; Lindsay & Edwards, 2013).

The intervention programs examined in other studies included only behavioral components such as sports activities (Evans et al., 2015; McKay et al., 2015, 2021; Özer et al., 2012; Tindall, 2013). Since this study involved cognitive and behavioral activities that included multiple components (such as providing information, videos, and slides about people with disabilities, role playing/dramatization, social interaction, arts, and sports activities), it is among the very few studies conducted within this scope.

These studies are generally studies of inclusion practices and acceptance in the classroom. One such study is Gaad's (2015) which implemented a program that included providing information and allowing children with intellectual disabilities to interact with typically developing children. However, the data were collected differently using a structured interview technique. As a result of the study, it was observed that the acceptance level of typically developing children towards children with disabilities has improved positively, which supports our study. Another study by Sagun-Ongtangco et al. (2021), similar to ours, included providing information, role-playing, dramatization, and social interaction in their practices to end equality and discrimination in inclusive education. Using qualitative methods, the study concluded that there was a

positive change in the attitudes of typically developing children toward children with disabilities, which supports the findings of our study. Schwab (2017) also found that not only was having students in the same learning space associated with more positive attitudes toward disability, but also, as in this study, involving students in a voluntary collaborative activity was associated with more positive attitudes. It is believed that the fact that social interaction activities with children with disabilities are not carried out in schools for children with typical development and that fun activities are included in the psycho-educational program is a factor that increases the level of volunteerism in the improvement of children's attitudes towards people with disabilities.

Since the experimental study aimed to improve the attitudes of typically developing children towards children with disabilities, not only in the school and/or classroom, but also in all aspects in general, the program implemented can be considered a preventive program rather than an intervention. Common components of successful interventions in effective disability awareness practices are multi-component approaches that include social contact with a person with a disability over a period of time, stories, and classroom activities (Lindsay & Edwards, 2013). As in this study, increasing the number and quality of interactions between children is thought to be an important factor in improving the attitudes of typically developing children toward children with disabilities.

Limitations

This study is limited to 61 children attending one primary school. It would be appropriate to conduct studies with larger sample groups to test the effectiveness of the psychoeducational program developed. Another limitation is that the study was based on only one class. It would be useful to test in different classes and at different ages to see at which age the program is more effective.

Another limitation of this study is that while the change in attitudes of typically developing children was measured, the effect on children with disabilities who participated in the application was not addressed. In future research on this topic, it is recommended that mixed methods studies be conducted to test the effects on both groups.

Conclusion

The goal of preventing discrimination on the basis of disability is to eliminate negative perceptions, attitudes, and behaviors that may occur against citizens with disabilities as a result of societal prejudice against what is different in society (United Nations Centre for Human Rights, 2006). Although the rights and freedoms of citizens with disabilities are equal to those of all other individuals, the greatest obstacle to the exercise of their rights and freedoms is not their individual incapacity but the negative attitudes and prejudices they face in society. However, it is not yet clear what the implementation of this goal should look like, how it should be carried out, and from which segment of society it should come. Information/awareness training may not be enough to change students' attitudes toward disability (Lee & Shin, 2019), so researchers developing interventions need to go beyond simple awareness training. In interventions, it seems reasonable for researchers to provide opportunities for students to have meaningful contact with people with disabilities.

It is believed that such interaction-based programs will make a significant contribution to the development of both children with disabilities and typical children. As stated in the United Nations Convention on the Rights of Persons with Disabilities, "encouraging all children to respect the human rights of persons with disabilities at every stage of the education system, starting from an early age, and through awareness-raising training programs" (United Nations Center for Human Rights, 2006), will increase the sense of belonging of disabled citizens in society. Children with disabilities who see that they are accepted and a part of the society in which they live will develop a more positive self-image, be more at peace with themselves, and have the opportunity to realize their potential more easily. On the other hand, the typically developing children will see people with disabilities and feel that life is not unipolar and perfect; they will learn at an early age to respect individual differences and that everyone living in society has equal rights and freedoms.

This study is a pilot application conducted with 21 students in the 4th grade of a primary school. It is hoped that this psycho-educational program will benefit new programs that can be sustainable and integrated into

primary education curricula through the collective efforts and cooperation of legislators, non-governmental organizations, institutions, and organizations. It is believed that addressing the systemic issues of disability discrimination and the social environment in new studies will increase the success of the studies.

Funding. This study was supported by Tübitak 2209-A University students research projects support programme under the name of "Together we are more beautiful" project.

Conflict of Interest. No conflict of interest exists for this manuscript for any of the authors.

Data Availability Statement. The data that support the findings of this study are available from the corresponding author upon reasonable request.

Ethical Approval. The study protocol has been approved by the Muğla Sıtkı Koçman University Scientific Research and Ethical Review Board (Report Number: 210065). The study was performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki and its following updates.

REFERENCES

- Alkaabi, A. M., Abdallah, A. K., Badwy, H. R., Badawy, H. R., & Almammari, S. A. (2022). Rethinking school principals' leadership practices for an effective and inclusive education. In *Rethinking inclusion and transformation in special education* (pp. 53-70). IGI Global.
- Andreou, E., Didaskalou, E., & Vlachou, A. (2015). Bully/victim problems among Greek pupils with special educational needs: associations with loneliness and self-efficacy for peer interactions. *Journal of Research in Special Educational Needs*, 15(4), 235-246. <https://doi.org/10.1111/1471-3802.12028>
- Armstrong, M., Morris, C., Abraham, C., Ukoumunne, O. C., & Tarrant, M. (2016). Children's contact with people with disabilities and their attitudes towards disability: A cross-sectional study. *Disability and Rehabilitation*, 38(9), 879-888. <https://doi.org/10.3109/09638288.2015.1074727>
- Berchiatti, M., Ferrer, A., Galiana, L., Badenes-Ribera, L., & Longobardi, C. (2021). Bullying in students with special education needs and learning difficulties: The role of the student-teacher relationship quality and students' social status in the peer group. In *Child & Youth Care Forum* (pp. 1-23). Springer US.
- Cincioğlu, Ş. (2023). *Kaynaştırma öğrencilerine yönelik akran zorbalığı*. (Yayımlanmamış doktora tezi). Trakya Üniversitesi; Trakya.
- Evans, A. B., Bright, J. L., & Brown, L. J. (2015). Non-disabled secondary school children's lived experiences of a wheelchair basketball programme delivered in the East of England. *Sport, Education and Society*, 20(6), 741-761. <https://doi.org/10.1080/13573322.2013.808620>
- Freer, J. R. (2023). Students' attitudes toward disability: A systematic literature review (2012-2019). *International Journal of Inclusive Education*, 27(5), 652-670. <https://doi.org/10.1080/13603116.2020.1866688>
- Friedman, H., Lopez-Pumarejo, T., & Friedman, L. W. (2006). The largest minority group - The disabled. *B>Quest*, 1(6), 1-13. Available at SSRN: <https://ssrn.com/abstract=2345457>
- Gaad, E. (2015). Look who's coming to school: the emirati student voice in an intervention-based study on inclusion of learners with intellectual disabilities in emirati mainstream government schools. *Journal of Research in Special Educational Needs*, 15(2), 130-138. <https://doi.org/10.1111/1471-3802.12053>
- Gümüş, E. Ç., & Öncel, S. (2020). Validity and reliability of the chedoke-mcmaster attitudes towards children with handicaps scale in Turkey: A methodological study. *Florence Nightingale Journal of Nursing*, 28(1), 1-12. doi: 10.5152/FNJJN.2020.426719
- Iwakuma, M., Miyamoto, K., & Murata, J. (2023). Changes in perceptions of Japanese university students toward disability: a mixed methods study. *International Journal of Disability, Development and Education*, 70(2), 156-168. <https://doi.org/10.1080/1034912X.2020.1865521>
- Katz, P. A. (2013). The acquisition of racial attitudes in children. In P.A. Katz (Ed.), *Towards the elimination of racism* (pp. 125-154). Pergamon General Psychology Series.

- Lee, O., & Shin, M. (2019). A National Online Survey of South Korean High School Students' Understanding of Learning Disabilities. *Learning Disability Quarterly*, 42(1), 46-59. <https://doi.org/10.1177/07319487187900>
- Liasidou, A., & Ioannidou, E. (2021). Disability-related bullying and its discursive formations and enactments in the social ecology of schooling. *Discourse: Studies in the Cultural Politics of Education*, 42(4), 499-512. <https://doi.org/10.1080/01596306.2020.1711514>
- Lindsay, S., & Edwards, A. (2013). A systematic review of disability awareness interventions for children and youth. *Disability and Rehabilitation*, 35(8), 623-646. <https://doi.org/10.3109/09638288.2012.702850>
- Llewellyn, G., Vaughan, C., & Emerson, E. (2015). Discrimination and the Health of People with Intellectual Disabilities. In G. Llewellyn, C. Vaughan, & E. Emerson (Eds.), *Health Disparities and Intellectual Disabilities* (pp. 43-72). <https://doi.org/10.1016/bs.irrdd.2015.03.005>
- Luciano, S., & Savage, R. S. (2007). Bullying risk in children with learning difficulties in inclusive educational settings. *Canadian Journal of School Psychology*, 22(1), 14-31. <https://doi.org/10.1177/0829573507301039>
- McKay, C., Block, M., & Park, J. Y. (2015). The impact of Paralympic School Day on student attitudes toward inclusion in physical education. *Adapted Physical Activity Quarterly*, 32(4), 331-348. <https://doi.org/10.1123/APAQ.2015-0045>
- McKay, C., Park, J. Y., & Block, M. (2021). Exploring the variables associated with student attitudes toward inclusion in physical education after taking part in the Paralympic School Day programme. *International Journal of Inclusive Education*, 25(3), 329-347. <https://doi.org/10.1080/13603116.2018.1550117>
- Mellecker, R., Lyons, E. J., & Baranowski, T. (2013). Disentangling fun and enjoyment in exergames using an expanded design, play, experience framework: A narrative review. *Research, Development, and Clinical Applications*, 2(3), 142-149. <https://doi.org/10.1089/g4h.2013.0022>
- Ministry of Family and Social Policy. (2014). *Toplum özürüllüğü nasıl anlıyor?* Available at: <https://www.aile.gov.tr/media/42389/how-society-perceives-persons-with-disabilities.pdf>
- Ministry of Family and Social Policy. (2010). *Özürüllülüğe dayalı ayrımcılığın ölçülmesi araştırması*. Available at: <https://www.aile.gov.tr/media/5597/ozurluluge-dayali-ayrimciligin-olculmesi-arastirmasi.pdf>
- Nesdale, D. (2004). Social identity processes and children's ethnic prejudice. In M. Bennett & F. Sani (Eds.), *The development of the social self* (p. 219-245). Psychology Press. Available at: <https://doi.org/10.4324/9780203391099>
- Nesdale, D. (2017). Children and social groups. In A. Rutland, D. Nesdale & C.S. Brown (Eds.), *The Wiley Handbook of Group Processes in Children and Adolescents* (pp. 3-22). John Wiley & Sons Ltd. Available at: <https://doi.org/10.1002/9781118773123.ch1>
- Özer, D., Baran, F., Aktop, A., Nalbant, S., Ađlamış, E., & Hutzler, Y. (2012). Effects of a Special Olympics Unified Sports soccer program on psycho-social attributes of youth with and without intellectual disability. *Research in Developmental Disabilities*, 33(1), 229-239. <https://doi.org/10.1016/j.ridd.2011.09.011>
- Özgönenel, S. Ö., & Girli, A. (2016). Otizmlili kaynaştırma öğrencilerinin sınıflarında akran ilişkilerinin geliştirilmesine yönelik eğitim programının etkililiğinin incelenmesi. *İlköğretim Online*, 15(1), 286-298. <http://dx.doi.org/10.17051/io.2016.35667>
- Öztürk, T., & Yıkmuş, A. (2013). Ana sınıflarına devam eden normal çocukları bilgilendirmenin zihin engelli yaşlıtlarına yönelik tutumlarına etkisi. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, 13(1), 1-20. <https://hdl.handle.net/20.500.12491/378>
- Özyürek, M. (2016). Engellilere Yönelik Tutumların Değıştirilmesi. Kök Yayıncılık.
- Ralph, N. (2018). Risk and Protective Factors for Bullying and Peer Victimization of Children with and without Special Educational Needs and Disability (SEND). (Unpublished Doctoral Thesis). Keele University. Staffordshire.
- Rivera, L. A., & Tilcsik, A. (2023). Not in my schoolyard: Disability discrimination in educational access. *American Sociological Review*, 88(2), 284-321. <https://doi.org/10.1177/00031224221150433>
- Rosenbaum, P. L., Armstrong, R. W., & King, S. M. (1986). Children's attitudes toward disabled peers: A self-report measure. *Journal of Pediatric Psychology*, 11(4), 517-530. <https://doi.org/10.1093/jpepsy/11.4.517>

- Rutland, A., & Killen, M. (2017). Fair resource allocation among children and adolescents: The role of group and developmental processes. *Child Development Perspectives*, 11(1), 56-62. <https://doi.org/10.1111/cdep.12211>
- Sagun-Ongtangco, K. S., Medallon, K. G., & Tan, A. J. (2021). Inclusive classrooms: Making it work for peers of children with disability. *International Journal of Inclusive Education*, 25(5), 623-639. <https://doi.org/10.1080/13603116.2019.1568596>
- Sarı, H., & Pürsün, T. (2019). Kaynaştırma sınıflarında akran zorbalığının öğretmen ve öğrenci görüşleri açısından incelenmesi. *Sosyal Politika Çalışmaları Dergisi*, 19(44), 731-768. <https://doi.org/10.21560/spcd.v19i49119.500742>
- Schwab, S. (2017). The impact of contact on students' attitudes toward peers with disabilities. *Research in Developmental Disabilities*, 62, 160-165. <https://doi.org/10.1016/j.ridd.2017.01.015>
- Sezer, F. (2012). Engelli bireylere karşı olumlu tutum geliştirmeye yönelik önleyici rehberlik çalışması; deneysel bir uygulama. *Education Sciences*, 7(1), 16-26.
- Şahbaz, Ü. (2007). Normal öğrencilerin kaynaştırma sınıflarına devam eden engelli öğrenciler hakkında bilgilendirilmelerinin engellilerin sosyal kabul düzeylerine etkisi. *Eurasian Journal of Educational Research*, (26), 199-208.
- Şahin, F., & Güldenöğlü, B. (2013). Engelliler konusunda verilen eğitim programının engellilere yönelik tutumlar üzerindeki etkisi. *Amasya Üniversitesi Eğitim Fakültesi Dergisi*, 2(1), 214-239.
- Tasa, H., & Namatoğlu, N. (2018). Engelli bireylere yönelik tutum değişimi ve duyarlılık eğitimleri. *Türkiye Klinikleri Journal of Psychol-Special Topics*, 3(1), 11-21.
- Temple, J. B., Kelaher, M., & Williams, R. (2019). Disability discrimination and avoidance in later life: Prevalence, disability differentials and association with mental health. *International Psychogeriatrics*, 31(9), 1319-1329.
- Terzi, Ö., Manav, G., & Karayağız, G. (2020). Muğla ilindeki ortaokul çocuklarının engellilere ilişkin tutumları. *Genel Sağlık Bilimleri Dergisi*, 2(2), 40-50.
- Tindall, D. (2013). Creating disability awareness through sport: Exploring the participation, attitudes and perceptions of post-primary female students in Ireland. *Irish Educational Studies*, 32(4), 457-475. <https://doi.org/10.1080/03323315.2013.859339>
- Triliva, S., Anagnostopoulou, T., Hatzinikolaou, S., Chimienti, G., & Mastorakou, A. (2009). The development and evaluation of a program to sensitize Greek grammar school students to issues relating to disability. *The European Journal of Counselling Psychology*, 1(1/2), 3-17.
- United Nations Centre for Human Rights. (2006). Centre for Human Rights. Available at: https://inhak.adalet.gov.tr/Resimler/Dokuman/2312020100834bm_48.pdf
- World Health Organization (WHO). (2023). Disability. Available at: https://www.who.int/health-topics/disability#tab=tab_1